Section-A

Multiple Choice Questions (MCQ's)

Q.1 Select the correct Answer:

(i) Molecules of matter are always busy in ________ motion.
(a) Never ending random (b) Ceasing random
(c) Never ending ragular (d) Ceasing and regular

(ii) Force of attraction between the molecules is ____ proportional to the distance between them.
(a) Inversely (b) Directly (c) squarely (d) Square root

(iii) A pair of scissors in a example of a _________.
(a) Pulley (b) Lever (c) Wheel and Axle (d) Inclined plane

(iv) The unit of work is ______________.
(a) Watt (b) Joule (c) Newton (d) Kilogram

(v) Work is done when a body is moved through a distance by a _________
(a) Fulcrum (b) Inlined plane
(c) Mechanical advantage (d) Force

(vi) G is called ____________.
(a) Gravitation attraction (b) Acceleration due to gravity
(c) Gravitaitonal force (d) Gravitational Constant

(vii) The S.I unit of force is _________.
(a) Meter (b) Meter / sec (c) Kilogram (d) Newton

(viii) The unit of torque in S.I unit is ______________.
(a)Newton (b) Kilogram (c) Newton meter (d) Meter

(ix) ______________ is a vector quantity.
(a) Mass (b) Torque (c) Distance (d) Time

(x) The fundamental unit of length is S.I unit of measurement is __________.
(a) Kilometer (b) Meter (c) Yard (d) Foot

(xi) The number of protons in the nucleus is called ________.
(a) Avogadro number (b) Atomic number
(c)Mass number (d) Nuclear number

(xii) Like poles of magnet _________ each other.
(a) Attract (b) Repel (c) Neither attract nor repel
(d) Sometimes attract and sometimes repel.

(xiii) The lightest particle in an atom is __________.
(a) Neutron (b) Electron (c) Deutron (d) Proton

(xiv) The speed of sound in air at normal temperature and pressure is ____ m/s.
(a) 336 (b) 672 (c) 712 (d) 785

(xv) For total internal relfection the angle of incidence must be _____ the critical angle.
(a) Greater than (b) Smaller than (c) Equal to (d) Half of

(xvi) if q - 4cm and p = 2cm, then the magnification of the mirrors is.
(a) 2 (b) 0.5 (c) 4 (d) None of these

(xvii) In transverse waves the distance between two consective crests or between two consecutive troughs is called ______________.
(a) Displacement (b) Wave length (c) Velocity (d) Speed

Section-B (Short Answers)

Note: Write short answer any EIGHT of the following . Each question carries 05 marks.

Q.2 What is Physics? Name some important branches of Physics.
Q.3 Differentiate between mass and weight.
Q.3 Define equilibrium. State the two conditions of equilibrium with examples.
Q.5 What do you know about Brownian motion?
Q.6 What is meant by anomalous expansion of water? What are the effects of this anomalous exapnesion of water on every day life?
Q.7 Define Reflection of Light. State the Laws of Reflection.
Q.8 What are the main defects of a human eye? How are they removed?
Q.9 How is rainbow formed?
Q.10 Distinguish between A.C and D.C
Q.11 Explain in the Law of Heat Exchange.
Q.12 The mass of an electron is 9.11×10^{-31} kg. Covert it in gm. milligram and microgram.
Q.13 Give reasons for the following:
(a) Why does piece of stone sink in water but a huge ship floats?
(b) Why does the flash of lightning seen earlier than the sound of thunder.

Section-C (Descriptive)

Note: Attempt any TWO questions of the following in detail.
Draw diagram where necessary.Each question carries 14 marks.

Q.14 (a)Define Momentum. Explain the law of conservation momentum with the help of example.
(b) A truck is moving east ward with a velocity of 15 m/sec.
If the momentum of the trucks is 30000 kg m/s. Find the mass of the truck.
Q.15 Explain what is meant by centripetal force.
Give three exmaples of body moving in a circular path.
Q.16 (a) State the Law of Conservation of Energy and explain this law for a freely falling body.
(b) Calculate the K.E of an object of mass 4kg moving at a speed of 10 m/s.